

- 1    1. A method of migrating from configuration  $m$  of a system to a configuration  $m+1$
- 2    thereof, the system's configuration being defined by first configuration tables in a
- 3    database and
- 4    the method comprising the steps performed by the system of:
  - 5       making second configuration tables that define configuration  $m+1$ ;
  - 6       making a determination whether the first configuration tables still define
  - 7    configuration  $m$ ; and
  - 8       if the first configuration tables still define configuration  $m$ , using the second
  - 9    configuration tables to modify the first configuration tables such that the first
  - 10   configuration tables define configuration  $m+1$ .
- 1    2. The method set forth in claim 1 further comprising the step of:
  - 2       making a snapshot of the first configuration tables prior to making the second
  - 3    configuration tables; and
  - 4       in the step of making a determination, the snapshot is used to make the
  - 5    determination.
- 1    3. The method set forth in claim 2 wherein:
  - 2       the snapshot is compared with the first configuration tables.
- 1    4. The method set forth in claim 1 wherein  
2    the step of making second configuration tables comprises the steps of:
  - 3       making a copy of the first configuration tables; and
  - 4       modifying the copy.
- 1    5. The method set forth in claim 4 further comprising the step of:
  - 2       making a snapshot of the first configuration tables when the copy is made; and
  - 3       in the step of making a determination, the snapshot is used to make the
  - 4    determination.

1   **6.** The method set forth in claim 5 wherein:  
2                 in the step of making a determination, the snapshot is compared with the first  
3         configuration tables.

1   **7.** The method set forth in claim 4 wherein:  
2                 the step of making a copy of the first configuration tables is part of a step of  
3         copying the database; and  
4                 the method further includes the step of testing the copied database with  
5         configuration  $m+1$ .

1   **8.** The method set forth in claim 4 wherein  
2         the system performs the method under control of a user; and  
3                 the method further comprises the step of:  
4                 having any other user log off before the step of making a copy of the first  
5         configuration tables.

1   **9.** The method set forth in claim 8 further comprising the step of:  
2                 also having any other user log off before the step of making a determination.

1   **10.** The method set forth in claim 1 wherein  
2                 the system performs the method under control of a user and  
3                 the method further comprises the steps performed when the comparison indicates  
4         that the first configuration tables no longer define configuration  $m$  of:  
5                 notifying the user that the first configuration tables no longer define configuration  
6          $m$ ; and  
7                 if the user so indicates, overwriting the first configuration tables with the second  
8         configuration tables.

1   **11.** The method set forth in claim 1 wherein:  
2                 in the step of using the second configuration tables to modify the first  
3         configuration tables, the first configuration tables are modified record-by-record.

1   **12.** The method set forth in claim 11 wherein  
2         the system performs the method under control of a user and  
3         the method further comprises the steps performed when the comparison indicates  
4         that the first configuration tables no longer define configuration *m* of:  
5             notifying the user that the first configuration tables no longer define configuration  
6         *m*; and  
7             if the user so indicates, overwriting the first configuration tables with the second  
8         configuration tables.

1   **13.** The method set forth in claim 1 further comprising the step of:  
2         getting an approval by a user of the system for the migration.

1   **14.** The method set forth in claim 13 wherein:  
2         the step of getting the approval is performed prior to the step of making a  
3         determination.

1   **15.** The method of claim 14 wherein:  
2         the step of getting the approval is performed immediately prior to the step of  
3         making a determination.

1   **16.** The method set forth in claim 1 wherein  
2         the system performs the method under control of a user; and  
3         the method further comprises the step of:  
4         having any other user log off before the step of making a determination.

1   **17.** The method set forth in claim 1 wherein:  
2         the database further includes a configuration change tracking table; and  
3         in the step of using the second configuration tables to modify the first  
4         configuration tables, the modifications to the first configuration tables are recorded in the  
5         configuration change tracking table.

- 1   **18.** The method set forth in claim 17 wherein:
- 2                 the modifications are recorded in the configuration change table together with an  
3                 indication that they were made during a migration from one configuration to another.
- 1   **19.** Apparatus employed in a system having a processor and a database which includes  
2                 first configuration tables that define a configuration  $m$  of the system to migrate the  
3                 system to a configuration  $m+1$  thereof,  
4                 the apparatus comprising:  
5                         a copy of the first configuration tables; and  
6                         a snapshot table which can be used by the processor to detect whether the first  
7                 configuration tables still define configuration  $m$ ,  
8                 the processor operating under control of a user of the system to modify the copy of the  
9                 first configuration tables to produce second configuration tables that define configuration  
10                  $m+1$ , compare the first configuration tables with the snapshot table to determine whether  
11                 the first configuration tables still define configuration  $m$ , and if the first configuration  
12                 tables do so, use the second configuration tables to modify the first configuration tables  
13                 so that the first configuration tables define configuration  $m+1$ .
- 1   **20.** The apparatus set forth in claim 19 wherein  
2                 when the first configuration tables no longer define configuration  $m$ , the processor  
3                 operates to notify the user thereof and to respond to an indication from the user to so do  
4                 by overwriting the first configuration tables with the second configuration tables.
- 1   **21.** The apparatus set forth in claim 19 further comprising:  
2                 a copy of the database, the copied database including the copy of the first  
3                 configuration tables,  
4                 the processor further operating under control of the user to test configuration  $m+1$   
5                 using the second configuration tables and the copied database.
- 1   **22.** The apparatus set forth in claim 19 wherein:

2           the processor operates under control of the user to make the snapshot table when  
3       the copy of the first configuration tables is made.

1       **23.** The apparatus set forth in claim 19 wherein:

2           the processor operates under control of the user to log any other users of the  
3       database off before making the copy of the first configuration tables and also before  
4       comparing the first configuration tables with the snapshot table.

1       **24.** The apparatus set forth in claim 19 further comprising:

2           a signoff table in the database which indicates one or more other users whose  
3       approval is required before the configuration  $m$  can be migrated to the configuration  $m+1$ ;  
4       and

5           the processor operates under control of the user to obtain approval from each of  
6       the other users before using the second configuration tables to modify the first  
7       configuration tables.

1       **25.** The apparatus set forth in claim 19 further comprising:

2           a configuration change tracking table in the database; and  
3           the processor further recording the modifications to the first configuration tables  
4       in the configuration change tracking table.

1       **26.** A data storage device, characterized in that:

2           the data storage device contains code which when executed by a processor performs a  
3       method of migrating from configuration  $m$  of a system to a configuration  $m+1$  thereof, the  
4       system's configuration being defined by first configuration tables in a database and  
5       the method comprising the steps of:

6           making second configuration tables that define configuration  $m+1$ ;  
7           making a determination whether the first configuration tables still define configuration  
8        $m$ ; and

9        if the first configuration tables still define configuration  $m$ , using the second  
10      configuration tables to modify the first configuration tables such that the first configuration  
11      tables define configuration  $m+1$ .